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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,610	09/09/2005	Fahri Keretli	263067US6XPCT	7963
22850	7590	12/10/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER BARROW, AMANDA J	
			ART UNIT 4111	PAPER NUMBER
			NOTIFICATION DATE 12/10/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/517,610	Applicant(s) KERETLI ET AL.	
	Examiner AMANDA BARROW	Art Unit 4111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-6 is/are rejected.
- 7) ☒ Claim(s) 3 and 7-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/22/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/22/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 4 (page 7, second to last paragraph). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 7-9 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 7-9 have not been further treated on the merits.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

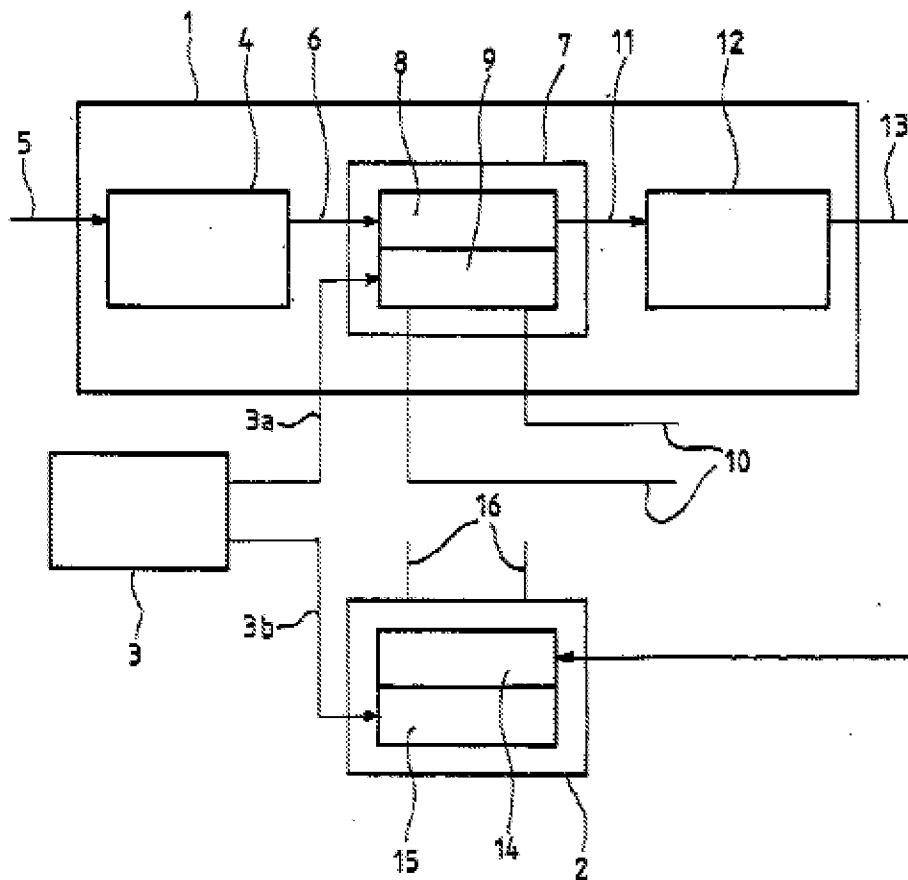
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Boudjemaa et al. (US Pat. No. 2004/0253491 A1) (hereinafter "Boudjemaa").

5. Regarding claim 1, Boudjemaa teaches a method for starting a fuel cell stack (a device for supplying hydrogen to a fuel cell (1)) as is illustrated in Figure 1 below comprising: a plurality of cells (primary fuel cell (2) and auxiliary fuel cell stack (7)) supplied by a reformer (4). When the reformer is cold the first subassembly (auxiliary fuel cell stack (7)) is supplied with reformates, and then when the reformer is hot, the first and second subassemblies of cells (primary fuel cell (2) and auxiliary fuel cell stack (7)) of the fuel cell stack (a device for supplying hydrogen to a fuel cell (1)) are supplied with reformates. The cells of the first subassembly (auxiliary fuel cell (7)) are optimized for operation with a cold reformer and the cells of the second subassembly (primary fuel cell (2)) are optimized for operation with a hot reformer (pg. 2, paragraphs 23-31).

6. Regarding claim 1, for clarity, a "cold reformer" is defined as producing reformates that are hydrogen (H₂) lean and carbon monoxide (CO) rich and has not reached its optimal operating condition, while a "hot reformer" is defined as producing reformates that are H₂ rich and CO lean and has reached its optimal operating condition. This information was disclosed by the applicant.

FIG_1



Regarding claim 2, Boudjemaa teaches a method in which the cells of the second subassembly (primary fuel cell (2)) are supplied when the said cells are at an appropriate operating temperature (pg. 2, paragraphs 23-31).

Suggestion

Regarding claims 1 and 2, this rejection could be overcome if "only" was inserted into claim 2 so that claim 2 read, "A method according to claim 1, in which the cells of the second subassembly are only supplied when the said cells are at an appropriate operating temperature."

Claim Rejections - 35 USC § 102 Continued

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 4 and 5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tillmetz et al. (US Patent No. 6,410,175 B1) ("hereinafter Tillmetz).

9. Regarding claim 4, Tillmetz teaches a fuel-cell stack (fuel cell system (30)) illustrated below in Figure 3 comprising: a plurality of cells (first fuel cell stack (21) and second fuel cell stack (22)) and a reformer (23) capable of supplying hydrogen from a hydrocarbon fuel, with the first subassembly of cells (first fuel cell stack (21)) being optimized to operate with a cold reformer and a second subassembly of cells (second fuel cell stack (22)) being optimized to operate with a hot reformer. (Column 6, lines 63-67; Column 7, lines 1-19). The phrases "optimized to operate with a hot (cold) reformer" are a functional limitation and impart no structural limitations (see MPEP 2114), and can therefore be interpreted to mean that the reformer is fluidly connected to

both assemblies.

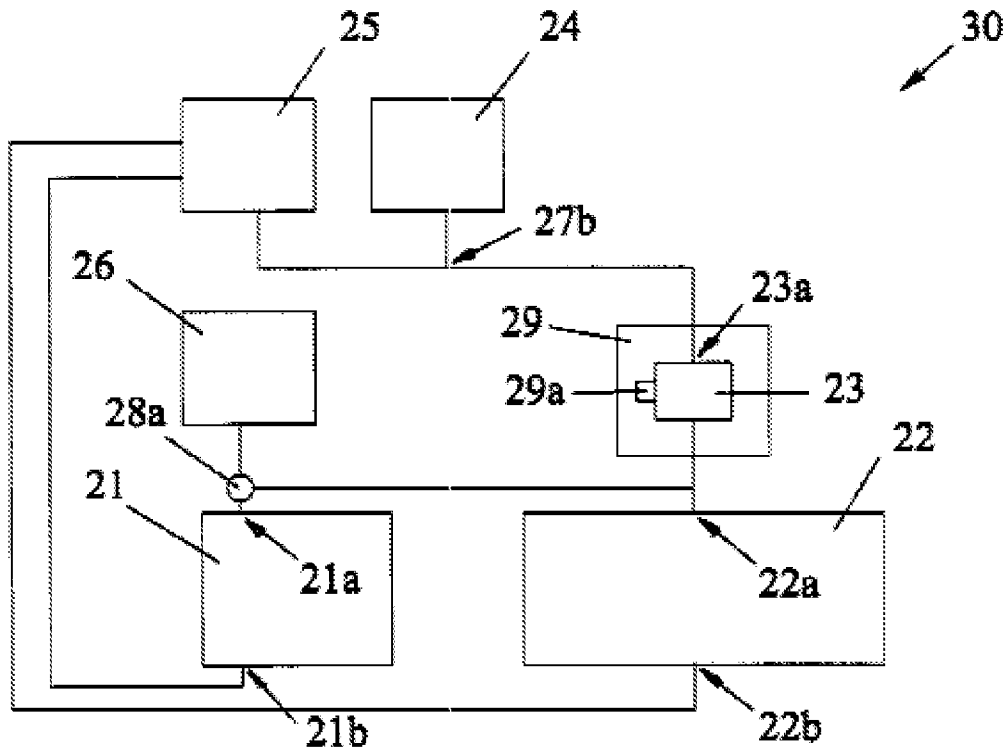


FIG. 3

10. Regarding claim 4, Tillmetz also teaches means for supplying the second subassembly of cells as a function of the reformer temperature:

"...the start-up period is typically completed when the temperature of a component in the fuel cell system reaches a pre-determined threshold value. Thus, the temperature parameter of the component may be monitored and used to trigger an end to the start-up period of the system. Since the operating temperature of the reformer is generally indicative of its ability to produce a satisfactory reformed fuel stream, its temperature may be used as the trigger in preferred embodiments" (Column 4, lines 26-34).

Regarding claim 5, Tillmetz teaches a system that can supply the second subassembly of cells (fuel cell stack 2 (22)) as a function of the temperature of the said

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second subassembly as, "Alternatively, the temperature of the second portion of fuel cells may be used as the trigger" (Column 4, lines 35-36). This is a direct continuation of the preceding quote (Column 4, lines 26-34).

Allowable Subject Matter

11. Claims 3 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: regarding claims 3 and 6, neither Boudjemaa nor Tillmetz teaches or suggests the claimed cooling circuits.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMANDA BARROW whose telephone number is (571)270-7867. The examiner can normally be reached on 7:30- 5:00 EST Monday - Friday; alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sines can be reached on (571)272-1263. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jonathan Crepeau/
Primary Examiner, Art Unit 1795